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Patent and Trademark Office

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NOTICE OF ALLOWANCE AND ISSUE FEE DUE

TM02/0312

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DALLAS TX 75270-2199

APPLICATION NO.	FILING DATE	TOTAL CLAIMS	EXAMINER AND GROUP ART UNIT	DATE MAILED
09/067,640	04/27/98	047	AKERS, G	03/12/01
First Named Applicant	STALLAERT, 35 USC 154(b) term ext. = 0 Days.			

TITLE OF INVENTION AND METHOD THEREFOR
~~APPARATUS FOR TRADING OF BUNDLED ASSETS INCLUDING BUNDLE SUBSTITUTION~~

ATTY'S DOCKET NO.	CLASS-SUBCLASS	BATCH NO.	APPLN. TYPE	SMALL ENTITY	FEE DUE	DATE DUE
2	18608-P001C1	705-037.000	D22 UTILITY	YES	\$620.00	06/12/01

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. PROSECUTION ON THE MERITS IS CLOSED.

THE ISSUE FEE MUST BE PAID WITHIN THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. THIS STATUTORY PERIOD CANNOT BE EXTENDED.

HOW TO RESPOND TO THIS NOTICE:

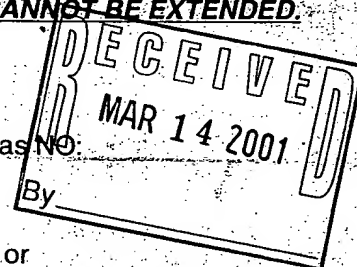
I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

- A. If the status is changed, pay twice the amount of the FEE DUE shown above and notify the Patent and Trademark Office of the change in status, or
- B. If the status is the same, pay the FEE DUE shown above.

If the SMALL ENTITY is shown as NO:

- A. Pay FEE DUE shown above, or
- B. File verified statement of Small Entity Status before, or with, payment of 1/2 the FEE DUE shown above.



II. Part B-Issue Fee Transmittal should be completed and returned to the Patent and Trademark Office (PTO) with your ISSUE FEE. Even if the ISSUE FEE has already been paid by charge to deposit account, Part B Issue Fee Transmittal should be completed and returned. If you are charging the ISSUE FEE to your deposit account, section "4b" of Part B-Issue Fee Transmittal should be completed and an extra copy of the form should be submitted.

III. All communications regarding this application must give application number and batch number. Please direct all communications prior to issuance to Box ISSUE FEE unless advised to the contrary.

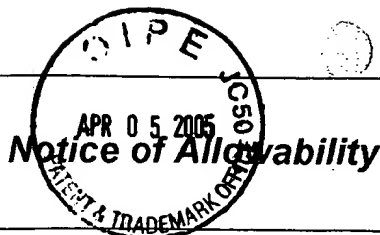
IMPORTANT REMINDER: Utility patents issuing on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

YOUR COPY

DOCKETED WAS 3/15/01



U.S. GPO: 1999-454-457/24601



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Application No.
09/067,640

Applicant(s)
Stallaert et al

Examiner
Geoffrey Akers

Group Art Unit
2164



All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance and Issue Fee Due or other appropriate communication will be mailed in due course.

☒ This communication is responsive to 4/27/98

☒ The allowed claim(s) is/are 1-47

☐ The drawings filed on _____ are acceptable.

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

A SHORTENED STATUTORY PERIOD FOR RESPONSE to comply with the requirements noted below is set to EXPIRE **THREE MONTHS** FROM THE "DATE MAILED" of this Office action. Failure to timely comply will result in ABANDONMENT of this application. Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

☐ Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL APPLICATION, PTO-152, which discloses that the oath or declaration is deficient. A SUBSTITUTE OATH OR DECLARATION IS REQUIRED.

☒ Applicant MUST submit NEW FORMAL DRAWINGS

☐ because the originally filed drawings were declared by applicant to be informal.

☒ including changes required by the Notice of Draftsperson's Patent Drawing Review, PTO-948, attached hereto or to Paper No. _____

☐ including changes required by the proposed drawing correction filed on _____, which has been approved by the examiner.

☐ including changes required by the attached Examiner's Amendment/Comment.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the reverse side of the drawings. The drawings should be filed as a separate paper with a transmittal letter addressed to the Official Draftsperson.

☐ Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Any response to this letter should include, in the upper right hand corner, the APPLICATION NUMBER (SERIES CODE/SERIAL NUMBER). If applicant has received a Notice of Allowance and Issue Fee Due, the ISSUE BATCH NUMBER and DATE of the NOTICE OF ALLOWANCE should also be included.

Attachment(s)

☐ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

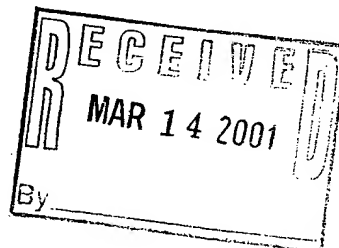
☐ Notice of Informal Patent Application, PTO-152

☐ Interview Summary, PTO-413

☐ Examiner's Amendment/Comment

☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

☒ Examiner's Statement of Reasons for Allowance



DOCKETED WAS 3/13/01 (A)

Art Unit: 2164

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DETAILED ACTION

1. Claims 1-47 have been examined.
2. This action is responsive to Applicant's application filed 4/27/98. This application is a continuation-in-part of earlier Application No: 08/992,647 now US Patent No: 6,035,287 issued March 7, 2000.
3. No claims have been added. No claims have been deleted. No claims have been amended. Claims 1-47 are pending.

Allowable Subject Matter

4. The instant invention relates to a novel system and method for trading asset bundles. An electronic data processing system executing a trade matching mechanism functions as a market intermediary and recombines assets from different market participants such that the requirements of participants seeking to acquire a particular asset are satisfied by participants seeking to dispose of the same asset.

The data processing system operates continuously and market participants can submit new trade orders or bundles or cancel open orders. Matches are sought continuously in real time. These bundles are defined in terms of their size, and a set of values representing the proportions of each of the asset sizes. Each bundle may contain a subset of assets which the market participant seeks to acquire and a subset of assets of which the market participant seeks to dispose. A market participant with more than one entered bundle may specify substantiability among the entered bundles by specifying portfolio constraints into the data processing system.

Art Unit: 2164

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As bundles are entered, the data processing system matches trades among the plurality of all bundles. A numerical value is utilized which represents the allocation of a particular bundle to the matched trade. Finally, the proportion of each asset in a particular bundle that is committed to the exchange is represented by the proportion of the asset in the bundle multiplied by the allocation value assigned by the data processing system to the given bundle. The elements that are specified in the independent claims 1,27,37,41 that differentiate the invention over the prior art are:

(A)-applicant's concept utilizes a method to match a trade when there is a real market surplus of a given asset. Values are chosen by the data processing system so that the matching condition is satisfied. Valuations are represented by the proportions of each asset in each of the bundles forming the trade.

(B)-applicant's concept utilizes a data processing system which may be a distributed processing system in the bundle trading market. Applicant's apparatus addresses the problem of market fragmentation of assets. Additionally, applicant's invention encompasses assets which may be non-monetary in characteristics in which case the exchanges are barter, although currency exchanges are not precluded.

The present invention provides a method for hedging the acquisition or disposition of a portfolio of equities by offsetting transactions in futures, or options. These transactions take place in fragmented markets, because the nature of the assets is inherently different (derivatives/equities, etc). Because these assets are essentially decoupled, and trade in different

Art Unit: 2164

markets, trading them individually may lead to an overall loss due to the different volatilities of the different assets. In this way the present invention meets the need of a combined "bundle" of assets to mitigate the risk of loss arising as a consequence of the trading of decoupled assets in divergent markets. The cited prior art does not disclose limitations in the context of the claims as stated in the independent claims 1,27,37,41.

Prior art does not disclose trading in bundles of assets to mitigate market volatility and risk of loss. This art of record includes:

- Ferstenberg(US Pat. No:5,873,071) discloses a computer method for intermediated exchange of commodities

- Braddock(US Pat. No: 4,412,287) discloses an automated stock exchange

- Kalmus(US Pat. No: 4,674,044) discloses an automated securities trading system

- Silverman(US Pat. No: 5,077,665) discloses a distributed matching system

- Silverman(US Pat. No: 5,136,501) discloses an anonymous matching system

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid delays, should preferably accompany the issue fee. Such submission should be clearly labeled "Comments on Statement of Reasons for Allowance."

Art Unit: 2164

Conclusion

Any comments regarding this communication should be directed to the examiner, Dr. Geoffrey Akers, P.E. who can be reached at (703)-306-5844 between the hours of 6:30 AM and 5:00 PM Monday through Friday. If attempts to contact the examiner are unsuccessful, the examiner's supervisor, Mr. Vincent Millin, may be telephoned at (703)-308-1065.

GRA

March 6, 2001



VINCENT MILLIN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

In Place of FORM PTO-1449 (Modified)

LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANTS' INFORMATION DISCLOSURE
STATEMENT

Serial No.: 09/067,640
Applicants: Jan Stallært et al.
Filing Date: April 27, 1998
Group:
Atty. Docket No.: 18608-P001C1

Reference Designation

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date
CA	AAA	4,412,287	10/25/83	Walter D. Braddock III	364	408
CA	ABA	4,674,044	06/16/87	Kalmus et al.	364	408
CA	ACA	5,077,665	12/31/91	Silverman et al.	364	408
CA	ADA	5,101,353	03/31/92	Lupien et al.	364	408
CA	AEA	5,136,501	08/04/92	Silverman et al.	364	408


OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial

- CA AFA Adams et al., "Commodity Bundling and the Burden of Monopoly," *The Quarterly Journal of Economics* Vol. XC, 475-498 (1976).
- CA AGA Brewer et al., "A Binary Conflict Ascending Price (BICAP) Mechanism for the Decentralized Allocation of the Right to Use Railroad Tracks," Social Science Working Paper 887, California Institute of Technology, Division of the Humanities and Social Sciences, Pasadena, California (February 1995).
- CA AHA Goodwin, Richard M., "Iteration, Automatic Computers, and Economic Dynamics," *Metroeconomica* Vol. III, pp. 1-7, (April 1951).
- CA AIA Levin, Jonathan, "An Optimal Auction for Complements," *Games and Economic Behavior* Vol. 18, 176-192 (1997).
- CA AJA McAfee et al., "Multiproduct Monopoly, Commodity Bundling, and Correlation of Values," *The Quarterly Journal of Economics* 371-383 (May 1989).
- CA AKA Gjerstad et al., "Price Formation in Double Auctions," pp. 1-32 (April 7, 1997)
- CA ALA McAfee et al., "Analyzing the Airwaves Auction," *Journal of Economic Perspectives* Vol. 10, No. 1, 159-175 (Winter 1996).
- CA AMA Weber, Bruce W., "Transparency and Bypass in Electronic Financial Markets," Proceedings of the Twenty-Seventh Annual Hawaii International Conference on System Sciences, pp. 865-874 (1994).
- CA ANA Domowitz et al., "Auctions as algorithms," *Journal of Economic Dynamics and Control* Vol. 18, pp. 29-60 (1994).
- CA AOA Radosevich, Lynda, "Wired," *Webmaster*, pp. 26-31 (February 1997).
- CA APA Branco, Fernando, "Designing Markets: on the Use of Combinational Bids in Multi-object Auctions," pp. 1-25 (May 1997).
- CA AQA McAfee et al., "Electronic Markets" in *Readings in Electronic Commerce*, pp. 293-309 (Addison Wesley Longman, Inc. 1997).
- CA ARA Hill et al., "Equity Trading, Program Trading, Portfolio Insurance, Computer Trading and All That," *Financial Analysts Journal*, pp. 29-35 (July-August 1988).
- CA ASA Rubinstein, Mark, "Market Basket Alternatives," *Financial Analysts Journal*, pp. 20-29 (September-October 1989).

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- GA ATA McCabe et al., "Designing 'Smart' Computer-Assisted Markets: An Experimental Auction for Gas Networks," *Journal of Political Economy* Vol. 5, pp. 259-283 (1989).
- GA AUA Rassenti et al., "A combinatorial auction mechanism for airport time slot allocation," *The Bell Journal of Economics*, Vol. 13, pp. 402-417 (1982).
- GA AVA Domowitz, Ian, "The Mechanics of Automated Trade Execution Systems," *Journal of Financial Intermediation* Vol. 1, pp. 167-194 (1990).
- GA AWA Rothkopf et al., "Computationally Manageable Combinatorial Auctions," pp. 1-26, Rutgers University (December 1995).
- GA AXA Bikhchandani et al., "Competitive Equilibrium in an Exchange Economy with Indivisibilities," *Journal of Economic Theory* Vol. 74, pp. 385-413 (1997).

Examiner: 

2/7/01
Date Considered:

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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368:18608-P001C1

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In Place of FORM PTO-1449 (Modified)

Serial No.: 09/067,640

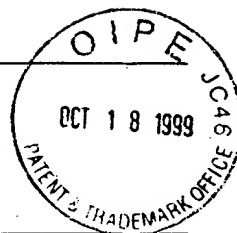
Applicants: Jan Stallaert et al.

Filing Date: April 27, 1998

Group: Not assigned

Atty. Docket No.: 18608-P001C1

**LIST OF PATENTS AND PUBLICATIONS FOR
APPLICANTS' INFORMATION DISCLOSURE
STATEMENT**



Reference Designation

U.S. PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
GA AAA	5,689,652	11/18/97	Lupien et al.	395	237	
ABC	5,873,071	02/16/99	Ferstenberg et al.	705	37	
ACA						
ADA						
AEA						
AFA						
AGA						
AHA						
AIA						

FOREIGN PATENT DOCUMENTS

Examiner Initial	Document Number	Date	Country	Class	Subclass	Translation Yes No
ANA						
AOA						
APA						

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

Examiner Initial

- GA AQA Ming Fan et al., *Creating Electronic Markets*, Dr. Dobb's Journal, November 1998, pp. 52, 54-56.
- ARA Ming Fan et al., *A Web-Based Financial Trading System*, Computer, Vol. 32, No. 4, April 1999, pp. 64-70.
- ASA R. M. Miller, *On Distributing the Intelligence of Economic Processes*, Economics and Artificial Intelligence Proceedings of the IFAC/IFORS/IFIP/IASC/AFCET Conference, AIX-En-Provence, France, 2-4 Sept., 1986, p. 161, XP002102608.

Examiner:

Date Considered:

EXAMINER Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

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368:18608-P001C1

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of 1995, no persons are required to a collection of information unless it contains a valid OMB control number.

Complete if Known

(use as many sheets as necessary)

APR 05 2003

1

2

09/067,640

April 27, 1998

Jan Stallaert

2761

Not yet assigned

18608-P001C1

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2/7/01

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, Patent and Trademark Office, Washington, DC 20231. **DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO:** Assistant Commissioner for Patents, Washington, DC 20231.

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APR 05 2005

NOTICE OF DRAFTPERSON'S
PATENT DRAWING REVIEWThe drawing filed (insert date) 4/27/98 are:

- A. not objected to by the Draftperson under 37 CFR 1.84 or 1.152.
- B. objected to by the Draftperson under 37 CFR 1.84 or 1.152 as indicated below. The Examiner will require submission of new, corrected drawings where necessary. Corrected drawings must be submitted according to the instructions on the back of this notice.

1. DRAWINGS. 37 CFR 1.84(a): Acceptable categories of drawings:

Black ink. Color.

Color drawing are not acceptable until petition is granted.

Fig.(s) _____

Pencil and non black ink is not permitted. Fig(s) _____

2. PHOTOGRAPHS. 37 CFR 1.84(b)

Photographs are not acceptable until petition is granted,

3 full-tone sets are required. Fig(s) _____

Photographs not properly mounted (must bristol board or photographic double-weight paper). Fig(s) _____

Poor quality (half-tone). Fig(s) _____

3. TYPE OF PAPER. 37 CFR 1.84(e)

Paper not flexible, strong, white and durable.

Fig.(s) _____

Erasures, alterations, overwritings, interlineations, folds, copy machine marks not acceptable. (too thin)

Mylar, vellum paper is not acceptable (too thin).

Fig(s) _____

4. SIZE OF PAPER. 37 CFR 1.84(f): Acceptable sizes:

21.0 cm by 29.7 cm (DIN size A4)

21.6 cm by 27.9 cm (8 1/2 x 11 inches)

All drawings sheets not the same size.

Sheet(s) _____

5. MARGINS. 37 CFR 1.84(g): Acceptable margins:

Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm

SIZE: A4 Size

Top 2.5 cm Left 2.5 cm Right 1.5 cm Bottom 1.0 cm

SIZE: 8 1/2 x 11

Margins not acceptable. Fig(s) 2-13

Top (T) _____

Left (L) _____

Right (R) _____

Bottom (B) _____

6. VIEWS. 37 CFR 1.84(h)

REMINDER: Specification may require revision to correspond to drawing changes.

Views connected by projection lines or lead lines.

Fig.(s) _____

Partial views. 37 CFR 1.84(h)(2)

Brackets needed to show figure as one entity.

Fig.(s) _____

Views not labeled separately or properly.

Fig.(s) _____

Enlarged view not labeled separately or properly.

Fig.(s) _____

7. SECTIONAL VIEWS. 37 CFR 1.84(h)(3)

Hatching not indicated for sectional portions of an object.

Fig.(s) _____

Sectional designation should be noted with Arabic or

Roman numbers. Fig.(s) _____

8. ARRANGEMENT OF VIEWS. 37 CFR 1.84(i)

Words do not appear on a horizontal, left-to-right fashion when page is either upright or turned, so that the top becomes the right side, except for graphs. Fig.(s) _____

Views not on the same plane on drawing sheet. Fig.(s) _____

9. SCALE. 37 CFR 1.84(k)

Scale not large enough to show mechanism without crowding, when drawing is reduced in size to two-thirds in reproduction.

Fig.(s) _____

10. CHARACTER OF LINES, NUMBERS, & LETTERS. 37 CFR 1.84(l)

Lines, numbers & letters not uniformly thick and well defined; clean, durable and black (poor line quality).

Fig.(s) 1-13

11. SHADING. 37 CFR 1.84(m)

Solid black areas pale. Fig.(s) _____

Solid black shading not permitted. Fig.(s) _____

Shade lines, pale, rough and blurred. Fig.(s) _____

12. NUMBERS, LETTERS, & REFERENCE CHARACTERS. 37 CFR 1.48(p)

Numbers and reference characters not plain and legible.

Fig.(s) 1-13Figure legends are poor. Fig.(s) 1-13

Numbers and reference characters not oriented in the same

direction as the view. 37 CFR 1.84(p)(3) Fig.(s) _____

English alphabet not used. 37 CFR 1.84(p)(3) Fig.(s) _____

Numbers, letters and reference characters must be at least

.32 cm (1/8 inch) in height. 37 CFR 1.84(p)(3) Fig.(s) 1-13

13. LEAD LINES. 37 CFR 1.84(q)

Lead lines cross each other. Fig.(s) _____

Lead lines missing. Fig.(s) _____

14. NUMBERING OF SHEETS OF DRAWINGS. 37 CFR 1.48(t)

Sheets not numbered consecutively, and in Arabic numerals

beginning with number 1. Fig.(s) _____

15. NUMBERING OF VIEWS. 37 CFR 1.84(u)

Views not numbered consecutively, and in Arabic numerals,

beginning with number 1. Fig.(s) _____

16. CORRECTIONS. 37 CFR 1.84(w)

Corrections not made from PTO-948 dated _____

17. DESIGN DRAWINGS. 37 CFR 1.152

Surface shading shown not appropriate. Fig.(s) _____

Solid black shading not used for color contrast.

Fig.(s) _____

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COMMENTS